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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/250,968	02/16/1999	DAVID A. HUGHES	081862.P137	2685

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LESTER J VINCENT
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
12400 WILSHIRE BOULEVARD SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

LOGSDON, JOSEPH B

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/250,968	HUGHES ET AL.
Examiner	Art Unit	
Joe Logsdon	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 July 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-36 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7

4) Interview Summary (PTO-413) Paper No(s). _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

Claim Rejections—35 U.S.C. 112, First Paragraph:

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-13 and 15-36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 and 33 specify “software configurable slot remap registers.” The term “slot remap register” is not commonly used in the art. For example, there exist no U.S. patents with the terms “slot,” “remap,” and “register” in the same patent. Page 8 of the specification merely teaches that the slot remap registers are programmed into the switch planes, and that the resulting replication feature differs from the prior art because it allows implementation through software rather than through hardware. Figs. 4 and 5 are apparently intended to provide enabling detail for the slot remap register. But Fig. 5 is only a table, and the discussion in the specification does not teach how to make the table, where or how to store it, or how to use it. Fig. 4 simply depicts the slot remap register as adjacent squares. Mapping information, the manner of creation of which is left untaught, is delivered to both the Spatial Crossbar 213 and the Logic Scheduler 215. This raises the issue that in order to teach how to make and use the slot remap registers it is necessary to also teach how to make and use the Logic Schedulers. But Fig. 4 simply depicts the Logic Scheduler as a square, and the specification fails to provide adequate instruction in the manner of

making and using the Logic Scheduler. The specification therefore fails to enable one of ordinary skill in the art to make or use the invention as claimed. Claims 2-4 and 34-36 depend on claims 1 and 33 and are therefore similarly rejected.

Claims 5, 15, and 24 specify “according to software configurable mapping information.” According to the specification, this “software configurable mapping information” is the “slot remap registers.” The term “slot remap register” is not commonly used in the art. For example, there exist no U.S. patents with the terms “slot,” “remap,” and “register” in the same patent. Page 8 of the specification merely teaches that the slot remap registers are programmed into the switch planes, and that the resulting replication feature differs from the prior art because it allows implementation through software rather than through hardware. Figs. 4 and 5 are apparently intended to provide enabling detail for the slot remap register. But Fig. 5 is only a table, and the discussion in the specification does not teach how to make the table, where or how to store it, or how to use it. Fig. 4 simply depicts the slot remap register as adjacent squares. Mapping information, the manner of creation of which is left untaught, is delivered to both the Spatial Crossbar 213 and the Logic Scheduler 215. This raises the issue that in order to teach how to make and use the slot remap registers it is necessary to also teach how to make and use the Logic Schedulers. But Fig. 4 simply depicts the Logic Scheduler as a square, and the specification fails to provide adequate instruction in the manner of making and using the Logic Scheduler. The specification therefore fails to enable one of ordinary skill in the art to make or use the invention as claimed. Claims 6-13, 16-23, and 25-32 depend on claims 5, 15, and 24 and are therefore similarly rejected.

Claim Rejections—35 U.S.C. 103(a):

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crowther et al. in view of the Admitted Prior Art. Crowther et al. teaches a network switch system comprising nodes containing CPUs, which inherently use high level software, and memory (Fig. 1; column 3, lines 47 to 65); switch cards, which inherently comprise switch planes (column 4, lines 51-59); and line cards coupled to the switch cards, wherein the line cards interface the traffic coming to and from ports of the switching system to the switch cards (Fig. 2; Fig. 3; column 3, line 66 to column 5, line 4). Crowther et al. fails to teach that the switch cards perform cell replication. The

Admitted Prior Art teaches a line card comprising a multiplexer/buffer combination, which is used to replicate cells (page 1, lines 15-17; page 2, lines 3-4). It would have been obvious to one of ordinary skill in the art to modify the invention of Crowther et al. so that the switch cards perform cell replication because each cell that passes through a line card must pass through a switch card, and the same components, i.e., the MUX/buffer combination, that perform the cell replication can be incorporated into the switch cards, and doing so would reduce the number of MUX/buffers required for the switching system.

Response to Arguments:

6. Applicant argues that slot remap registers are described as containing five bits. But this only says what they contain—not what they are, i.e., not their structure or manner of interconnection.

Applicant argues that the specification describes a “slot remap register” as a “switch fabric.” But the term “switch fabric” is apparently more general than the term “remap register,” so stating that a “slot remap register” is a “switch fabric” is not really defining “slot remap register”; instead, such a statement provides only a general categorization of the term “slot remap register.” The fact that the term “switch fabric” appears in several patents is therefore irrelevant.

Applicant argues that the specification teaches that the crossbar and scheduler receive mapping information from the remap registers. But the specification does not teach how this is accomplished and does not adequately describe the mapping information.

With regard to claim 14, Applicant argues that the cited references do not teach cell replication through switch cards of a network switch using high-level software to channel data traffic through a plurality of physical ports. But neither does claim 14.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Logsdon whose telephone number is (703) 305-2419. The examiner can normally be reached on Monday through Friday from 1:00 pm to 9:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

For informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Joe Logsdon

Patent Examiner

Wednesday, October 23, 2002



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600